



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/332,212	06/14/1999	JOSEPHUS J.M. BRAAT	PHN-16.982	2640

7590

06/20/2002

U S PHILIPS CORPORATION  
580 WHITE PLAINS ROAD  
TARRYTOWN, NY 10591

EXAMINER

SMITH, ZANDRA V

ART UNIT PAPER NUMBER

2877

DATE MAILED: 06/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/332,212

Applicant(s)

BRAAT, JOSEPHUS J.M.

Examiner

Zandra V. Smith

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2877

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election of claims 1-10 in paper number 8 is acknowledged. An office action in response follows.

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

The specification is objection to for not providing appropriate section headings (i.e. Summary of Invention, Detailed Description). Additionally, a typographical error appears on page 5, line 25. "2" should be "3." Appropriate correction is required.

### ***Claim Objections***

The following is a quotation of section (d)(1) of 37 CFR 1.75

The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

Claims 2, 3, and 8 are objected under 37 CFR CFR 1.75 section (d)(1), as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2 and 3 include antecedent and grammatical errors, in addition to inconsistent and undefined variables (i.e. the equation in claim 2 is described as the equation for spherical aberration, not tangential coma and there is no antecedent for tangential coma).

Art Unit: 2877

Claim 8 includes undefined variables.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6-7 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by

*Nakamura et al. (4,952,787).*

As to **claims 1, 6-7, and 9-10**, Nakamura discloses a system for detecting focus error using pits and light beams having astigmatism, comprising:

a scanning device including a radiation source (20, col. 7, line 38);

an objective system (125) (40) and a detection system (205) (col. 7, line 41), characterized in

that the detection system includes a plurality of detectors and in that the device comprises an electronic circuit for forming a time difference between corresponding parts of the detector signal relating to passage of the radiation beams over one the marks and for generating a time difference signal representing a wavefront aberration, specifically focus error (col. 3, lines 1-5 and col. 4, lines 29-40).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

see col 8 - line 52 - col 10 - line 60  
12/59 objective

Art Unit: 2877

Claims 2-3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Nakamura et al. (4,959,787)* in view of *Hoshi et al. (4,733,065)*.

As to **claims 2-3 and 8**, Nakamura discloses everything claimed, as applied above, with the exception of the detector details, however the use of four or more sub-detectors to determine wavefront aberration is well known as taught by Hoshi. Hoshi discloses an optical head device that includes the use of intensity signals from four or more sub-detectors to determine wavefront aberration (col. 10, line 65- col. 11, line 42 and col. 15, line 1- col. 16, line 60). It would have been obvious to one having ordinary skill in the art at the time of invention to use the intensity of the detector elements in any combination to determine wavefront aberrations since the intensity across the detector elements will change in response to aberrations in the wavefront reaching the detectors.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Nakamura et al. (4,959,787)* and in view *Hoshi et al. (4,733,065)* of and further in view of *Kuramochi et al. (5,008,552)*.

As to **claims 4-5**, Nakamura and Hoshi disclose everything claimed, as applied above, with the exception of details of the detector and wobbling, however to do so is well known as taught by Kuramochi. Kuramochi discloses a data recording and reproducing apparatus that includes a divided detector (fig. 11) and wobbling of the detector (col. 17, lines 38-50). It would have been obvious to one having ordinary skill in the art at the time of invention to include a divided detector and wobbling to allow for detection of multiple wavefront aberrations.

Art Unit: 2877

***Fax/Telephone Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zandra V. Smith whose telephone number is (703) 305-7776.

The examiner can normally be reached on 7:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (703)308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0530.



Zandra V. Smith  
Patent Examiner  
Art Unit 2877  
June 13, 2002